

# PATENT COOPERATION TREATY

Rec'd PCT/EP

19 JUL 2004

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

Charig, Raymond J.  
ERIC POTTER CLARKSON  
Park View House  
58 The Ropewalk  
Nottingham  
Nottinghamshire NG1 5DD  
GRANDE BRETAGNE

26 JAN 2004

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

23.01.2004

Applicant's or agent's file reference  
TECU/P27639PC

### IMPORTANT NOTIFICATION

International application No.  
PCT/EP 03/00517

International filing date (day/month/year)  
17.01.2003

Priority date (day/month/year)  
19.01.2002

Applicant

STICHING VOOR DE TECHNISCHE WETENSCHAPPEN et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Ullrich, C

Tel. +49 89 2399-2322



## PATENT COOPERATION TREATY

PCT

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19 JUL 2004

INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TECUP27639PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/00517	International filing date (day/month/year) 17.01.2003	Priority date (day/month/year) 19.01.2002
International Patent Classification (IPC) or both national classification and IPC A61B8/14		
Applicant STICHING VOOR DE TECHNISCHE WETENSCHAPPEN et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
  - ☒ Basis of the opinion
  - ☐ Priority
  - ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - ☐ Lack of unity of invention
  - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - ☐ Certain documents cited
  - ☐ Certain defects in the international application
  - ☐ Certain observations on the international application

Date of submission of the demand  18.08.2003	Date of completion of this report  23.01.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Artikis, T  Telephone No. +49 89 2399-7923  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/00517**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

**Description, Pages**

1-13 as originally filed

**Claims, Numbers**

1-29 as originally filed

**Drawings, Sheets**

1/9-9/9 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/00517

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 28-29

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 28-29 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-27
Inventive step (IS)	Yes: Claims	
	No: Claims	1-27
Industrial applicability (IA)	Yes: Claims	1-27
	No: Claims	

2. Citations and explanations

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/00517

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see separate sheet

**Re Item III**

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claims 28 and 29 attempt to define the relevant subject-matter with reference to the drawings only. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is certainly not the case here.

**Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. The following report has been drafted assuming that claim 1 has been amended to involve the features of dependent claim 8, which excludes the use of contrast agents, in order to avoid any objection under Rule 67.1(iv) PCT concerning methods for treatment of the human or animal body by surgery.
3. Although method claim 9 and apparatus claim 23 have been drafted as independent claims, they comprise all the features of the independent claims 1 and 18 respectively. Claims 9 and 23 are therefore dependent on the latter (Rule 6.4 PCT).
4. Reference is made to the following document:  
  
D1: US-A-5 928 151 (HOSSACK JOHN A ET AL) 27 July 1999
5. Concerning the independent claims of the present application the following is noted.
  - 5.1. The present application does not meet the requirements of Article 33(2) PCT, because the subject-matter of claim 1 is not new.

Document D1, which the references in parentheses apply to, discloses (see abstract) a method for ultrasound imaging comprising the steps of:

- transmitting ultrasound energy into a target volume at at least a first fundamental frequency (see abstract, lines 2-4);
- receiving reflected and/or scattered ultrasound energy from the target volume (see abstract, lines 6-8); and
- detecting components of the received signal at multiple harmonics of the fundamental frequency (see col. 4, lines 64-66).

Consequently, document D1 discloses the combination of features in claim 1, whose subject-matter is not new (Art. 33(2) PCT).

- 5.2. Independent claim 18 defines the apparatus to carry out the method defined in claim 1. Consequently, the arguments presented under point 5.1 can be applied mutatis mutandis to the subject-matter of claim 18, which accordingly is not new (Art. 33(2) PCT).
6. The additional features of the dependent claims 2 to 17 and 19 to 27 of the present application are already known from the available prior art or relate to minor constructional changes which come within the scope of customary practice followed by persons skilled in the art. These claims would be allowable only if they referred to an independent claim, which meets the requirements of the PCT with respect to novelty and/or inventive step (see Rule 6 PCT).